

First named inventor: Anderson
Serial no. 10/615,737
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In the claims

1. (original) A method comprising:
determining a spitting recovery level of a fluid-ejection mechanism; and,
determining a humidity of the fluid-ejection mechanism based at least on the spitting recovery level.
2. (original) The method of claim 1, further comprising determining a temperature of the fluid-ejection mechanism, wherein determining the humidity of the fluid-ejection mechanism is further based on the temperature.
3. (original) The method of claim 2, wherein determining the temperature of the fluid-ejection mechanism comprises measuring an operating temperature of the fluid-ejection mechanism.
4. (original) The method of claim 2, wherein determining the temperature of the fluid-ejection mechanism comprises utilizing a thermistor within the fluid-ejection mechanism.
5. (original) The method of claim 1, wherein determining the spitting recovery level of the fluid-ejection mechanism comprises:
waiting for a threshold length of time during which the fluid-ejection mechanism has remained idle;
attempting to eject fluid drops until fluid drop ejection has been detected; and,
correlating the spitting recovery level as a number of the fluid drops attempted to be ejected until the fluid drop ejection has been detected.

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6. (original) The method of claim 5, wherein waiting for the threshold length of time during which the fluid-ejection mechanism has remained idle comprises waiting for the threshold length of time during which the fluid-ejection mechanism has remained idle out of cap.
7. (original) The method of claim 5, wherein attempting to eject the fluid drops until the fluid drop ejection has been detected comprises utilizing a fluid drop detector.
8. (original) The method of claim 5, wherein determining the humidity of the fluid-ejection mechanism comprises correlating the humidity of the fluid-ejection mechanism as proportional to the number of the fluid drops attempted to be ejected until the fluid drop ejection has been detected.
9. (original) The method of claim 1, wherein determining the humidity of the fluid-ejection mechanism comprises determining an approximate operating humidity of the fluid-ejection mechanism.
10. (original) The method of claim 1, wherein determining the humidity of the fluid-ejection mechanism comprises interpolating the humidity of the fluid-ejection mechanism based on the spitting recovery level.
11. (original) The method of claim 1, wherein determining the humidity of the fluid-ejection mechanism comprising determining the humidity of the fluid-ejection mechanism as one of a plurality of humidity ranges based on the spitting recovery level.
12. (original) The method of claim 1, further comprising adjusting at least servicing requirements of the fluid-ejection mechanism based on the determined humidity.

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13. (original) The method of claim 12, wherein adjusting at least the servicing requirements of the fluid-ejection mechanism comprises adjusting an interval at which the fluid-ejection mechanism is to be serviced based on the determined humidity.

14. (original) The method of claim 12, wherein adjusting at least the servicing requirements of the fluid-ejection mechanism comprises adjusting a type of servicing for the fluid-ejection mechanism based on the determined humidity.

15. (original) The method of claim 12, wherein adjusting at least the servicing requirements of the fluid-ejection mechanism comprises additionally adjusting operating characteristics of the fluid-ejection mechanism based on the determined humidity.

16. (original) The method of claim 12, further initially comprising waiting for a threshold length of time since at least the servicing requirements of the fluid-ejection mechanism have been adjusted based on the determined humidity.

17. (original) The method of claim 12, further initially comprising receiving user instruction to adjust at least the servicing requirements of the fluid-ejection mechanism have been adjusted based on the determined humidity.

18. (original) The method of claim 12, further comprising storing at least the servicing requirements of the fluid-ejection mechanism as have been adjusted to firmware associated with the fluid-ejection mechanism.

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19. (original) The method of claim 1, wherein the fluid-ejection mechanism is an inkjet-printing mechanism.
20. (original) A fluid-ejection device comprising:
a fluid-ejection mechanism to eject fluid drops;
a fluid drop detector to determine a spitting recovery level of the fluid-ejection mechanism;
a temperature sensor to sense an operating temperature of the fluid-ejection mechanism;
and,
a controller to adjust at least servicing requirements of the fluid-ejection mechanism based on the spitting recovery level and the operating temperature of the fluid-ejection mechanism,
wherein the spitting recovery level is dependent at least on humidity of the fluid-ejection mechanism.
21. (original) The fluid-ejection device of claim 20, wherein the fluid drop detector comprises one of an electrostatic fluid drop detector and an optical fluid drop detector.
22. (original) The fluid-ejection device of claim 20, wherein the controller is to adjust at least the servicing requirements of the fluid-ejection mechanism by selecting one of a plurality of values for at least the servicing requirements based on the operating temperature and the spitting recovery level of the fluid-ejection mechanism
23. (original) The fluid-ejection device of claim 20, further comprising firmware in which at least the servicing requirements for the fluid-ejection mechanism are stored.

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24. (original) The fluid-ejection device of claim 20, wherein the temperature sensor is a thermistor.
25. (original) The fluid-ejection device of claim 20, wherein the fluid-ejection mechanism is an inkjet-printing mechanism, and the fluid-ejection device is an inkjet-printing device.
26. (original) A fluid-ejection device comprising:
a fluid-ejection mechanism to eject fluid drops;
a fluid drop detector to indicate a successful attempt by the fluid-ejection mechanism to eject the fluid drops; and,
means for approximating an operating humidity of the fluid-ejection mechanism based on an operating temperature of the fluid-ejection mechanism and a number of unsuccessful attempts by the fluid-ejection mechanism to eject the fluid drops before the successful attempt by the fluid-ejection mechanism to eject the fluid drops.
27. (original) The fluid-ejection device of claim 26, wherein the means is further for adjusting at least servicing requirements of the fluid-ejection mechanism based on the operating humidity and the operating temperature of the fluid-ejection mechanism.
28. (original) The fluid-ejection device of claim 26, further comprising a temperature-sensing mechanism to sense the operating temperature of the fluid-ejection mechanism.
29. (original) The fluid-ejection device of claim 26, wherein the fluid-ejection mechanism is an inkjet-printing mechanism, and the fluid-ejection device is an inkjet-printing device.

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30. (original) A computer-readable medium having firmware stored thereon associated with a fluid-ejection mechanism to perform a method comprising:

attempting to eject fluid drops until fluid drop ejection has been detected;

counting a number of the fluid drops attempted to be ejected until the fluid drop ejection has been detected;

measuring an operating temperature of the fluid-ejection mechanism;

determining an approximate operating humidity of the fluid-ejection mechanism based on the number of the fluid drops counted and the operating temperature measured; and,

adjusting at least one of operating characteristics and servicing requirements of the fluid-ejection mechanism based on the approximate operating humidity and the operating temperature of the fluid-ejection mechanism.

31. (original) The computer-readable medium of claim 30, the method further initially comprising waiting for a threshold length of time during which the fluid-ejection mechanism has remained idle.

32. (original) The computer-readable medium of claim 30, the method further initially comprising waiting for a threshold length of time since the at least one of the operating characteristics and the servicing requirements of the fluid-ejection mechanism have been adjusted based on the approximate operating humidity and the operating temperature of the fluid-ejection mechanism.

33. (original) The computer-readable medium of claim 30, the method further comprising storing the at least one of the operating characteristics and the servicing requirements of the fluid-ejection mechanism as have been adjusted.

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34. (original) The computer-readable medium of claim 30, wherein the fluid-ejection mechanism and the firmware are part of a fluid-ejection device.
35. (original) The computer-readable medium of claim 34, wherein the fluid-ejection mechanism is an inkjet-printing mechanism and the fluid-ejection device is an inkjet-printing device.
36. (currently amended) A method comprising:
determining a spitting recovery level of a fluid-ejection mechanism using a fluid drop detector; and,
adjusting at least servicing requirements of the fluid-ejection mechanism based on the spitting recovery level of the fluid-ejection mechanism,
wherein the spitting recovery level is related to a humidity of the fluid-ejection mechanism.
37. (original) The method of claim 36, further comprising determining a temperature of the fluid-ejection mechanism, wherein adjusting at least the servicing requirements of the fluid-ejection mechanism is further based on the temperature of the fluid-ejection mechanism.
38. (original) The method of claim 36, wherein determining the spitting recovery level of the fluid-ejection mechanism comprises:
waiting for a threshold length of time during which the fluid-ejection mechanism has remained idle;
attempting to eject fluid drops until fluid drop ejection has been detected; and,
correlating the spitting recovery level as a number of the fluid drops attempted to be ejected until the fluid drop ejection has been detected.

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39. (original) The method of claim 36, wherein the fluid-ejection mechanism is an inkjet printing mechanism.